

MR2349-741

IN THE SPECIFICATION:

Please replace the first paragraph under the heading “Summary of the Invention”, beginning on Page 2, Line 19, and ending on Page 2, Line 24, with the “clean copy” of the amended paragraph as follows:

CLEAN COPY OF SPECIFICATION, PAGE 2, LINES 19-24:

A2
Sub
Box
The object of the present invention is to provide an input device having the functions of a fusible link, an inrush current limiter, and an EMC choke. A fusible resistance winding is wound around a magnetic component having a high resistance and a high permeability. Because the input device of the present invention can replace the conventional three separate subassemblies, the object of reducing the cost and shrinking the volume can be accomplished.

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Please replace the first three paragraphs under the heading “Detailed Description of the Preferred Embodiments”, beginning on Page 3, Line 12, and ending on Page 4, Line 4 with the “clean copy” of the amended paragraphs as follows:

CLEAN COPY OF SPECIFICATION, PAGE 3, LINE 12 - PAGE 4, LINE 4:

As shown in FIGS. 2 and 3, the present invention provides a multipurpose input device conforming to the requirements of safety and EMC. The multipurpose input device is series-connected between an AC input source and a rectifying circuit 3. In this embodiment of the present invention, the rectifying circuit 3 comprises a bridge rectifier D1-D4 and a capacitor C. The multipurpose input device comprises a magnetic component 1, a pair of electrical leads 10, and a resistance coil 2.

The magnetic component 1 is a magnetic core having ferromagnetic characteristic. The material of the magnetic core ought to have a high resistivity and a high permeability to bear voltage difference generated when the resistance coil 2 blows; otherwise, it is also feasible to use an appropriate coil frame or package mechanism to separate the magnetic core from the circuit.

The resistance coil 2 is a fusible/resistance winding wound around the magnetic component 1 and is connected to electrical leads 10 at first terminal 11 and second terminal 12. The resistance coil 2 has the functions of a fusible link, an inrush current limiter, and an EMC choke. That is, it can limit the input current within a safe value, reduce the inrush current, and choke the noise affecting the AC input source.

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Please replace the fifth paragraph under the heading “Detailed Description of the Preferred Embodiments” beginning on Page 4, Line 8, and ending on Page 4, Line 20, with the “clean copy” of the amended paragraph as follows:

CLEAN COPY OF AMENDED SPECIFICATION, PAGE 4, LINES 8-20:

Additionally, the resistance coil 2 can be formed by assembling a first coil 21 of a smaller number of turns with a second coil 22 of a larger number of turns.

Because the first coil 21 has only a layer of winding, it can reduce parasitic capacitance to be advantageous for resisting high frequency. Parasitic capacitance between multiple layers of winding can be avoided, and a low-impedance leakage path is prevented for the high-frequency current. Thus, a reduction of the high-frequency impedance of the coil is avoided. The second coil 22 is advantageous for resisting lower-frequency disturbance.

Because of its structure of multiple layers of winding, a large number of turns can be provided within a shorter length. For a cylindrical choke coil, the reactance is approximately proportional to the square of number of turns, and inversely proportional to the length. Therefore, a high impedance for resisting low frequency can be obtained.
